

CLAIMS

Therefore, the following is claimed:

- 1 1. ~~A digital subscriber line (DSL) communication device, comprising:~~
2 ~~a receiver for developing a received signal; and~~
3 ~~a digital signal processor (DSP) configured to perform layer two error~~
4 ~~detection by computing a frame check sequence (FCS) on each frame of said received~~
5 ~~signal.~~
- 1 2. The apparatus as defined in claim 1, further comprising means for saving
2 the adaptive parameters of an adaptive device located within said receiver, and calculated
3 by said DSP, if said frame check sequence indicates that said received signal is error free.
- 1 3. The apparatus as defined in claim 1, further comprising means for using
2 existing parameters of an adaptive device located within said receiver if said frame check
3 sequence indicates that said received signal contains errors.
- 1 4. The apparatus as defined in claim 1, wherein said DSL device operates in
2 a multipoint environment.
- 1 5. The apparatus as defined in claim 1, wherein said DSL device operates in
2 a half duplex environment.
- 1 6. The apparatus as defined in claim 1, wherein said DSL device operates in
2 a full duplex environment.

1 7. The apparatus as defined in claim 1, wherein said DSL device operates in
2 an asymmetrical duplex environment.

1 8. The apparatus as defined in claim 1, wherein said layer two error detection
2 resides in layer one of the OSI seven layer model.

1 9. The apparatus as defined in claim 2, wherein said means for saving the
2 adaptive parameters of an adaptive device located within said receiver resides in layer one
3 of the OSI seven layer model.

1 10. A method for updating adaptive parameters in a digital subscriber line
2 (DSL) communication device, comprising the steps of:
3 developing, in a receiver, a received signal; and
4 performing, in a digital signal processor (DSP), layer two error detection
5 by computing a frame check sequence (FCS) on each frame of said received signal.

1 11. The method as defined in claim 10, further comprising the step of saving
2 the adaptive parameters of an adaptive device located within said receiver and calculated
3 by said DSP if said frame check sequence indicates that said received signal is error free.

1 12. The method as defined in claim 10, further comprising the step of using
2 existing parameters of an adaptive device located within said receiver if said frame check
3 sequence indicates that said received signal contains errors.

1 13. The method as defined in claim 10, wherein said DSL device operates in a
2 multipoint environment.

1 14. The method as defined in claim 10, wherein said DSL device operates in a
2 half duplex environment.

1 15. The method as defined in claim 10, wherein said DSL device operates in a
2 full duplex environment.

1 16. The method as defined in claim 10, wherein said DSL device operates in
2 an asymmetrical duplex environment.

1 17. The method as defined in claim 10, wherein said step of performing layer
2 two error detection occurs in layer one of the OSI seven layer model.

1 18. The method as defined in claim 11, wherein said step of saving the
2 adaptive parameters of an adaptive device located within said receiver occurs in layer one
3 of the OSI seven layer model.

1 19. A computer readable medium having a program for updating adaptive
2 parameters in a digital subscriber line (DSL) communication device, the program
3 comprising:
4 means for developing, in a receiver, a received signal; and
5 means for performing, in a digital signal processor (DSP), layer two error
6 detection by computing a frame check sequence (FCS) on each frame of said received
7 ~~signal.~~

1 20. The program as defined in claim 19, further comprising means for saving
2 the adaptive parameters of an adaptive device located within said receiver and calculated
3 by said DSP if said frame check sequence indicates that said received signal is error free.

